

**Remarks**

Claims 1-62 are presently pending. Claims 1-10 and 13-37 are withdrawn from consideration and claims 11-12 and 38-62 are rejected. Claims 50, 59 and 60 have been amended to correct non-substantive errors relating to antecedent basis. No new matter has been added and entry of the amendments is respectfully requested.

**Regarding 35 U.S.C. §112, Second Paragraph**

The rejection of claims 48-52 and 54-59 under 35 U.S.C., second paragraph as allegedly indefinite is respectfully traversed. Applicants request removal of this rejection, which further has been rendered moot by the above amendments.

**Regarding 35 U.S.C. § 102**

The rejection of claims 40-43, 45-46, 50-52 and 59-60 under 35 U.S.C. §102(b) as allegedly anticipated by O'Reilly et al., *Animal Genetics* (1998) is respectfully traversed.

When lack of novelty is based on a printed publication that is asserted to describe the same invention, a finding of anticipation requires that the publication describe all of the elements of the claims. *C.R. Bard, Inc. v. M3 Sys., Inc.*, 157 F.3d 1340, 1349, 48 U.S.P.Q.2d 1225, (Fed. Cir. 1998) (quoting *Shearing v. Iolab Corp.*, 975 F.2d 1541, 1544-45, 24 U.S.P.Q.2d 1133, 1136 (Fed. Cir. 1992)). To establish a *prima facie* case of anticipation, the Office must show that the single reference cited as anticipatory art describes all the elements of the claimed invention.

O'Reilly discloses a method for the determination of the parentage of a fish using compatibility analysis of microsatellites as markers. The use of microsatellite markers was found to be helpful for determining the parents of 729 atlantic salmon from a choice of 12 sets of parents, further crosses were simulated and the importance of scoring errors on the resolution and accuracy of such analyses was evaluated. In the analysis described by O'Reilly et al., all parent animals, as well as offspring, were farmed together and the resulting analysis involving full and half sibling offspring necessarily led to incorrect parentage assignments. As a result, O'Reilly neither teaches nor suggests candidate parent genotypes representing distinct populations of origin.

For the reasons explained above, Applicants submit that the claimed invention of claims 40-43, 45-46, 50-52 and 59-60 is distinct from O'Reilly and respectfully request withdrawal of this ground of rejection.

**Regarding 35 U.S.C. §103(a)**

The rejection of claims 44 and 47-48 under 35 U.S.C. 103(a) as being unpatentable over O' Reilly et al (Animal Genetics 1998) in view of Agresti (Aquaculture 2000) is respectfully traversed. The deficiencies of the primary reference are described above. The instant rejection relies on the alleged teachings of the primary reference, which are addressed above. The deficiencies of the O'Reilly are not cured by viewing O'Reilly in combination with Agresti. Accordingly, for the reasons set forth above with regard to O'Reilly being distinct from the claimed invention, removal of the rejection of claims 42 and 45-46 under 35 U.S.C. 103(a) as being unpatentable over O' Reilly et al (Animal Genetics 1998) in view of Agresti (Aquaculture 2000) is respectfully requested.

The rejection of claim 49 under 35 U.S.C. §103(a) as being unpatentable over O' Reilly et al (Animal Genetics 1998) in view of Garcia de Leon (Aquaculture 1998) is respectfully traversed. The deficiencies of the primary reference are described above. The instant rejection relies on the alleged teachings of the primary reference, which are addressed above. The deficiencies of the O'Reilly are not cured by viewing O'Reilly in combination with Garcia de Leon. Accordingly, for the reasons set forth above with regard to O'Reilly being distinct from the claimed invention, removal of the rejection of claim 47 under 35 U.S.C. §103(a) as being unpatentable over O' Reilly et al (Animal Genetics 1998) in view of Garcia de Leon (Aquaculture 1998) is respectfully requested.

The rejection of claim 53 under 35 U. C. 103(a) as being unpatentable over O' Reilly et al (Animal Genetics 1998) in view of Fries (Nature 2001) is respectfully traversed. The deficiencies of the primary reference are described above. The instant rejection relies on the alleged teachings of the primary reference, which are addressed above. The deficiencies of the O'Reilly are not cured by viewing O'Reilly in combination with Fries. Accordingly, for the reasons set forth above with regard to O'Reilly being distinct from the claimed invention,

removal of the rejection of claim 53 under 35 U.S.C. §103(a) as being unpatentable over Reilly et al (Animal Genetics 1998), in view of Fries et al (Nature 2001) is respectfully requested.

The rejection of claims 56-58 under 35 U.S.C. §103(a) as being unpatentable over Reilly et al (Animal Genetics 1998), Fries et al (Nature 2001), and in further of Cox (US Patent 6406847 Filed 1999) is respectfully traversed. The deficiencies of the primary reference are described above. The instant rejection relies on the alleged teachings of the primary reference, which are addressed above. The deficiencies of the O'Reilly are not cured by viewing O'Reilly in combination with Fries et al. and Cox. Accordingly, for the reasons set forth above with regard to O'Reilly being distinct from the claimed invention, removal of the rejection of claims 56-58 under 35 U.S.C. §103(a) as being unpatentable over Reilly et al (Animal Genetics 1998), Fries et al (Nature 2001), and in further of Cox (US Patent 6406847 Filed 1999) is respectfully requested.

The rejection of claims 61-62 under 35 U.S.C. §103(a) as being unpatentable over Reilly et al (Animal Genetics 1998) in view of Dodds (US Patent 6287254) is respectfully traversed. The deficiencies of the primary reference are described above. The instant rejection relies on the alleged teachings of the primary reference, which are addressed above. The deficiencies of the O'Reilly are not cured by viewing O'Reilly in combination with Dodds. Accordingly, for the reasons set forth above with regard to O'Reilly being distinct from the claimed invention, removal of the rejection of claims 61-62 under 35 U.S.C. §103(a) as being unpatentable over Reilly et al (Animal Genetics 1998) in view of Dodds (US Patent 6287254) is respectfully requested.

### **Regarding Double Patenting**

The provisional rejection of claims 40-62 for obviousness-type double patenting over claims 38-61 of co-pending Application No. 10/349,331, is respectfully traversed. Applicants respectfully request that this rejection be held in abeyance until there is an indication of allowable subject matter.

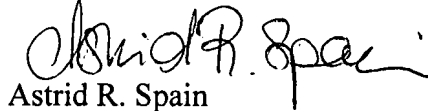
**Conclusion**

In light of the amendments and remarks herein, Applicant submits that the claims are now in condition for allowance and respectfully requests a notice to this effect. The Examiner is invited to call the undersigned agent if there are any questions.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 502624 and please credit any excess fees to such deposit account.

Respectfully submitted,

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